

RETROCECAL HERNIA- A RARE CAUSE OF ACUTE ABDOMEN

General Surgery

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ABSTRACT

Retrocecal hernia is a rare form of internal hernia, a subtype of pericecal hernia, with herniation of bowel loops through a peritoneal recess that develops from peritoneal folds in the paracecal area. These types of hernia require a high index of suspicion for their timely management especially in cases where they present with acute abdomen. Pericecal hernias may mimic any of the plethora of conditions presenting as Right iliac fossa pain and/or lump and/or acute small bowel obstruction making their diagnosis difficult. Prompt diagnosis with clinical and radiological examination using Computed tomography and surgical intervention is necessary to avoid the life threatening complications such as strangulation of bowel and gangrene. We herein report a rare case of pericecal hernia which presented as acute abdomen with abdominal distension and vomiting, on computed tomography was found to have a closed loop small bowel obstruction which was confirmed on exploration. This case report reinforces the need of prompt operative intervention in such cases to avoid bowel resections and to decrease the morbidity and mortality in such cases.

KEYWORDS

pericecal hernia, acute abdomen, small bowel obstruction.

INTRODUCTION

Hernias are broadly classified into internal and external hernia. Internal hernias include those hernias wherein there is protrusion of part or whole of viscus or a solid organ through a peritoneal, omental, mesenteric or a diaphragmatic defect or aperture. Internal hernias tend to develop in patients with developmental anatomic defects eg. Paraduodenal hernia [1] through the fossa of Landzert and the fossa of Waldeyer, trans-mesosigmoidal hernia, pericecal hernia, etc. or through acquired defects developing iatrogenically after a surgical intervention or due to trauma.[2] Internal hernias as a cause of small bowel obstructions (SBO) is seen in 0.6-5.8% of all cases of SBO. [3]. Internal hernias may pose a diagnostic challenge preoperatively because of their nonspecific presentation. Abdominal computed tomography (CT) gives information if the obstruction is partial or complete, its location, and helps in determining the surgical management.

Pericecal hernias account for 0.1%-6.6% of all internal hernias.[4] The pericecal fossa lies behind the cecum and is bounded lateral by parietocecal fold and medially by mesentericocecal fold.[4] Four subtypes namely, ileocolic, retrocecal, ileocecal and paracecal exist. The commonest presentation is an herniated ileal loop protruding into a defect in the cecal mesentery.[4] (Fig 1.) There are several explanations regarding the pathogenesis of the pericecal fossa, including disruption of the normal process of intestinal rotation during embryonic development, tissue fragility due to aging, pressure elevation of the inner abdomen, retroperitoneal adhesion, post-abdominal surgery and vascular changes [5].

Clinically these hernias present with non-specific right lower quadrant pain and sometimes mistakenly diagnosed as pain secondary to appendiceal abnormalities. A high index of suspicion and early diagnosis and exploration is mandated as there is higher incidence of occlusive symptoms with rapid progression to strangulation and a mortality rate approaching as high as 75% in some series.[6] Clinical diagnosis of pericecal hernias is elusive in many cases and in most cases requires a computed tomography for its identification.

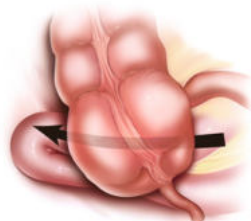


Fig 1. Pericecal hernia-(retrocecal subtype)
Source: internet

We report one such unique case of retrocecal hernia which presented as acute abdomen and was successfully managed with surgical exploration.

CASE STUDY

A 77 year old female with unremarkable past surgical history and a known case of hypertension and diabetes mellitus type II, presented to the Emergency Department with progressively worsening abdominal pain and distention of 1 day duration. she was vitally stable except for mild tachycardia. On physical examination, he had generalized abdominal tenderness and guarding of the abdomen. Laboratory findings were significant for an abnormally elevated white blood cell count of 13,900/mm³ but otherwise insignificant. A plain abdominal x-ray showed multiple air fluid levels. A computed tomographic scan showed a partially intra-peritoneal cecum, displaced anteriorly, abutting the anterior abdominal wall in the right iliac fossa with dilated ileal loop posterior to cecum with mild focal luminal narrowing at proximal & distal ends of the dilated loop with maximum diameter of 2.9cm. (Fig. 2, 3) Distal ileal loops appeared collapsed with no signs of bowel ischaemia/ perforation/ generalized peritonitis. The CT findings were suggestive of closed loop ileal obstruction secondary to internal hernia. Based on this clinical presentation, the patient received an initial diagnosis of small intestinal obstruction and a lower midline laparotomy with a right paramedian incision was performed. Intraoperatively approximately 10 cm of distal ileum was herniated through the posterior ileocolic recess and WAS twisted along its mesentery (Fig 4.). There was no evidence of strangulation/ perforation. The loop was reduced and primary closure of the defect was using absorbable sutures. The postoperative course was uneventful and the patient was discharged from the hospital on the 7th postoperative day.

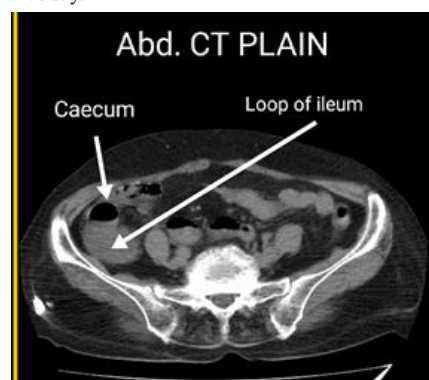


Fig 2: Computed Tomography (Plain) of abdomen showing retrocecal herniation.

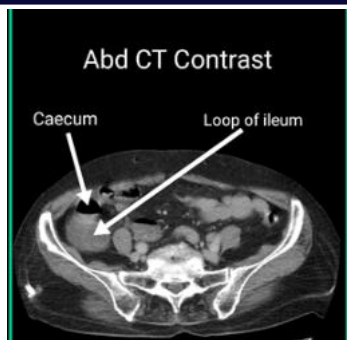


Fig 3: Computed Tomography (Contrast) of abdomen showing retro-cecal herniation.

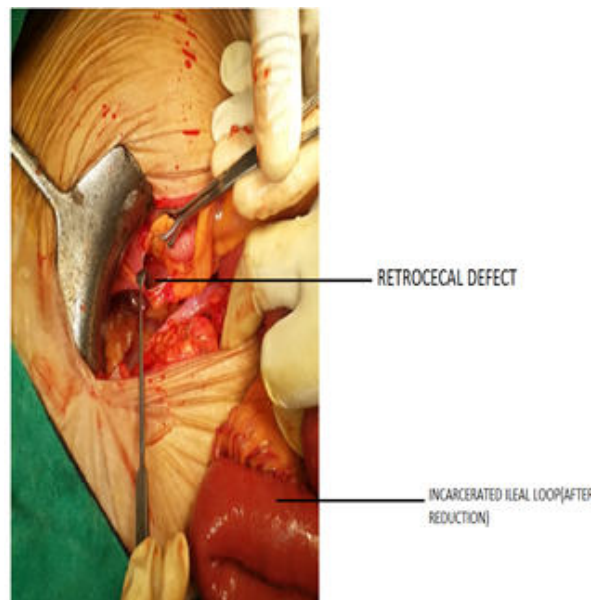


Fig 4. Intraoperative finding (after reduction of herniated loop)

DISCUSSION:

Internal hernia is the protrusion of visceral contents through a congenital or an acquired opening within the peritoneal cavity. It has an incidence of less than 1% and is significantly less common than external hernias.[3] According to the classification by Ghahremaniet al., internal abdominal hernia can be of six main groups: paraduodenal, foramen of Winslow, transmesenteric, pericecal, intersigmoidal, and paravesical hernias.[5] Although internal hernias may have a congenital etiology, most of the reported cases have occurred during adulthood and presentation in childhood is uncommon. The most common types of internal hernias that present in children are paraduodenal and transmesenteric hernias. Pericecal hernias are responsible for 0.1–6.6% of internal hernias.[4] During embryological development, the anatomy of the cecal and pericecal peritoneum is not determined until the midgut has completed migration and the cecum is fixed in the right lower quadrant. Upon the resorption of peritoneal surfaces, four different pericecal recesses are formed by folds of the peritoneum - superior ileocecal recess, inferior ileocecal recess, retrocecal recess, and paracoliculci. These recesses may sometimes be absent or rarely large enough to admit several fingers and extend posterior to the cecum. Preoperative diagnosis of internal hernia is difficult because symptoms may range from intermittent and mild digestive complaints to symptoms of acute-onset intestinal obstruction.[7] Internal hernias are silent if they are easily reducible, but the majority often cause pain and recurrent episodes of intestinal obstruction. Internal hernias are clinically apparent only when incarcerated internal hernias result from small bowel obstruction; therefore, a delay in diagnosis may lead to strangulation and an increased risk of serious complications. CT scan is the key for internal hernia diagnosis and management as it provides information about the presence of bowel obstruction, strangulation, and ischemia.[8] CT appearance of a pericecal hernia is not established as there are few cases in the literature. A CT scan usually reveals a cluster of bowel

loops located posteriorly and laterally to the normal cecum, occasionally extending into the right paracolic gutter and pushing the cecum anteriorly and medially. Treatment of an internal hernia with signs of bowel obstruction includes volume resuscitation, correction of electrolyte imbalances and surgery. Laparotomy has generally been the preferred approach for the presence of small bowel obstruction. Technical difficulties and potential complications such as having no work space from distended small bowel loops and the inability to visualize the transition point make laparotomy more preferred over laparoscopy.

CONCLUSIONS

A Pericecal hernia is an unusual occurrence and is seen to occur more frequently in older women. The clinical signs and symptoms often mimic acute appendicitis and there is delay in diagnosis. Clinical findings are often insufficient to make a diagnosis. Early diagnosis can be made with imaging like computed tomography. In patients early laparoscopy can help confirm diagnosis and reduce the internal hernia. The internal hernia orifice should be closed or enlarged to prevent further herniation. Delay in diagnosis can result in hernia getting complicated needing an exploratory laparotomy and prolonged morbidity. Paracecal hernia is a rare cause of intestinal obstruction. Awareness of the imaging features will help in prompt diagnosis and avoidance of strangulation. Laparoscopic surgery is an excellent alternative to laparotomy, with several advantages for the patient.

We describe a unique case of retrocecal hernia presenting as acute abdomen and mimicking acute appendicitis. Surgeons should be aware of this paracecal hernia type, when they encounter the internal hernia.

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